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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/720,391

11/25/2003

Jae Kyum Kim

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EXAMINER

HECKERT, JASON MARK

ART UNIT

PAPER NUMBER

1746

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/720,391

Applicant(s)

KIM ET AL.

Examiner

Jason Heckert

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/10/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-24 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-16 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 1/10/07 have been fully considered but they are not persuasive. Applicant asserts that the structure of Aouad et al. (Aouad) is not like the structure as claimed. Examiner disagrees, as it appears as if the applicant is merely giving like structures different names, and thereby asserting that these different named structures don't act in a similar manner. For example, applicant shows a curved structure 72 holding ceramics, a wash aid, wherein this curved structure has holes. This structure has an open surface facing the wash drum 56. A cover structure 75 covers said open surface and then mounts on the drum wall. Aouad discloses equivalent elements in the form of a curved structure 31 with holes 38 wherein wash aids are inserted into this curved structure and flow out the holes. This structure is hollow and therefore has an open face facing the drum (see figure 3 of the provisional application 60/356544) that is covered by the base 30, which is then attached to the wall of the drum by means 301. Although Aouad may call curved structure 31 the "cover" and structure 30 the "base", these elements still read on the applicants proposed invention in both structure and function. The base 30 covers the opening of the curved cover 31 just as the cover 75 covers the curved structure 72 of the applicant's invention. In both inventions, a cavity for holding and releasing wash aids is formed when theses elements come together.

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2. In regards to the proposed amendments, applicant withdraws the rejection under U.S.C. §102(b) and U.S.C. §112, yet maintains the rejections under U.S.C. §103 as described below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 6-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts in view of Aouad. Roberts discloses a device for use in a standard washing machine, specifically installed inside a drum, tub, or wash basket 12. Said device comprises a ceramic tile 10 and receivers in the form of adhesive strips 20 and 22. Said adhesive strips are permanently attached to the inner surface of the wash basket (col. 3 line 4-5). As depicted in Fig. 4, the adhesive is placed along a circumferential direction, in an axial direction, and a predetermined space is left between each strip.

5. Roberts discloses the use of ceramics and associated plurality of receivers in a drum-type washing machine as discussed above, but does not disclose a housing. Aouad discloses a housing (Fig. 1) for various wash aids to be fixed to the drum in a drum-type washing machine. Aouad further discloses the housing as comprising a curved structure 31 with holes 38, wherein wash aids are inserted into this curved structure and flow out the holes. This structure is hollow and therefore has an open face facing the drum (see figure 3 of the provisional application 60/356544) that is

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covered by the base 30, which is then attached to the wall of the drum by means 301.

The cover 31 and base 30 respectively read on the "circumferential side" and "cover" of the applicant's invention. The circular curved cover 31 protrudes into the center of the drum along an axial direction. It would have been obvious to one skilled in the art to modify Roberts and include housings as the ceramic receivers instead of adhesive strips, as described by Aouad, to contain various ceramic media other than singular tiles.

6. In regards to claim 6, it has been amended to include the phrase "wherein at least one ceramic receiver comprises a plurality of ceramic receivers each with a housing." Examiner has interpreted this to be a mere duplication of the receiver and receiver housing apparatus of claim 1, which was rejected above. Duplication of parts was held to have been obvious. *St. Regis Paper Co. v. Beemis Co. Inc.* 193 USPQ 8, 11 (1977); *In re Harza* 124 USPQ 378 (CCPA 1960). It would have been obvious at the time of the invention to modify Roberts in view of Aouad, as stated above, and further include multiple receivers in multiple housings, as it is nothing more than a mere duplication of parts.

7. In regards to claim 8 – 10, hooks fixing to holes and guide grooves are notoriously well known in the art. Furthermore, their use is functionally equivalent to the adhesive strips 20 and 22 disclosed by Roberts and pegs 404 and holes 405 disclosed by Aouad. Also, rearrangement of parts was held to have been obvious. *In re Japikse* 86 USPQ 70 (CCPA 1955). It doesn't matter if hooks, pegs, or grooves are formed on the inside of the drum with their respective counterparts formed on the housing or vice

versa, as all are obvious choices achieving the end result of adhering the housing to the drum. It would have been obvious to modify Aouad and use guide grooves or hooks to adhere the housing to the drum, as taught by convention.

8. In regards to claim 11, rearrangement of parts was held to have been obvious. *In re Japikse* 86 USPQ 70 (CCPA 1955). Aouad discloses all of the parts described in the claimed invention. Simply orienting them in a different manner cannot be considered novel. It would have been obvious to modify Aouad and orient the housing so that the cover adheres to or is built into the drum, to provide a solid connection between the housing and the drum.

9. In regards to claim 12, reinforcement ribs, as well as other structural reinforcements, are used conventionally throughout the art to increase the structural integrity of a variety of apparatuses and cannot be considered novel. It would have been obvious to modify Aouad and provide a structural reinforcement on the cover in order to increase structural integrity.

10. Claims 13 -16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts in view of Aouad in view of Kobayashi and further in view of Kikuta. Roberts discloses the use of a ceramic in a washing machine, but does not discuss materials nor disclose the use of particles or beads. Kobayashi discloses a ceramic receiver for use with ceramic powder, which is naturally of irregular size and shape, capable of radiating far infrared rays or piezoelectric ceramic material (col. 3 lines 19). Said materials are to be used to increase the washing activity of water in a washing machine. Furthermore, in figures 5 and 6, Kobayashi shows said powder in the form of balls 5.

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Therefore it would have been obvious to modify Roberts in view of Aouad, as stated above, and Kobayashi and include ceramic media in the form of balls or an irregular powder-like particulate in order to increase the effective surface area exposed to the wash water.

11. Roberts and Kobayashi don't specify the particular ceramic, but do indicate typical ceramics can be used and suggest those that radiate far infrared rays. Kikuta discloses that various ceramics containing alumina and silica are far infrared radiating materials (col. 1 line 16-19). Thus, it would have been obvious to modify Roberts in view of Aouad, as stated above, and include aluminum oxide and silicon oxide (alumina and silica) as taught by Kikuta, in the form of particles or beads as taught by Kobayashi, in order to achieve the water activating effect of far infrared radiating materials.

12. In regards to claim 15, sintered bodies are very common throughout the art when the combination of two materials is preferred. Considering that alumina and silica are common infrared radiating materials, it would have been obvious to form the silica/aluminum balls by sintering in order to provide a consolidated structure for placement in a washing machine.

Allowable Subject Matter

13. Claim 17 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The specific claimed design of the ceramic material, having an elastic center and a ceramic exterior, has patentability.

14. Claims 18-24 allowed.

Claim Objections

15. Claim 17 objected to under 37 CFR 1.75 as being a substantial duplicate of claim 20. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Heckert whose telephone number is (571) 272-2702. The examiner can normally be reached on Mon. to Friday, 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMH

A handwritten signature in black ink, appearing to read 'Michael Barr', with a stylized flourish at the end.

MICHAEL BARR
SUPERVISORY PATENT EXAMINER